IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) An electrically powered actuator comprising:

an elongated housing having a proximal end defined by a proximal end block, a distal end defined by a distal end block and a longitudinal axis;

a rotation shaft extending along said longitudinal axis and being rotatably supported within and axially fixed relative to said housing ~~member~~ and having a proximal end and a distal end;

a thrust member having a proximal end and a distal end, said thrust member being concentric with, and axially moveable relative to, said rotation shaft and said housing along said longitudinal axis, said thrust member further extending through said distal end block, with the distal end of said thrust member extending beyond and being axially moveable beyond said distal end block;

a coupling nut connected with said thrust member and moveable therewith, said thrust member and said coupling nut being non-rotatable relative to said housing ~~member~~; ~~and~~

an electric motor having an output drive shaft extending therethrough, said drive shaft having a proximal end on one side of said motor and a distal end on the other side of said motor, said output drive shaft being in-line and concentric with~~, and integrally formed with~~ said rotation shaft, with the distal end of said drive shaft connected with the proximal end of said rotation shaft; and

a rotary positioning encoder mounted to the proximal end of said output drive shaft.

2. (original) The actuator of claim 1 wherein said coupling nut is a planetary roller screw nut.

3. (currently amended) The actuator of claim 1 wherein the proximal end of said thrust member ~~includes a proximal end~~ is connected with said coupling nut and the distal end of said thrust member is a ~~an opposite free end, said~~ free end for connection with a ~~having a~~ fixture ~~connection end~~.

4. (cancelled)

5. (currently amended) The actuator of claim 1 [4] wherein the proximal end of said output drive shaft extends through said encoder and includes a manually rotatable end.

6. (original) The actuator of claim 5 including a head cover having an access opening t provide access to said manually rotatable end.

7. (original) The actuator of claim 6 wherein said access opening includes a selectively removeable plug to provide selective access to said manually rotatable end.

8. (original) The actuator of claim 1 including a motor housing having a distal end connected with said elongated housing and a proximal end and further including a head cover connected with the proximal end of said motor housing.

9. (currently amended) ~~The~~ An electrically powered actuator ~~of claim 8~~ comprising:

an elongated housing having a longitudinal axis;

a rotation shaft extending along said longitudinal axis and being rotatably supported within said housing member;

a thrust member concentric with, and axially moveable relative to, said rotation shaft along said longitudinal axis;

a coupling nut connected with said thrust member and moveable therewith, said thrust member and said coupling nut being non-rotatable relative to said housing member; ~~and~~

an electric motor having an output drive shaft, said output drive shaft being in-line and concentric with, and integrally formed with said rotation shaft; and

a motor housing having a distal end connected with said elongated housing and a proximal end and further including a head cover connected with the proximal end of said motor housing, wherein said head cover includes a first head section and a second head section, said second head section being selectively connectable to said first head section in a plurality of positions.

10. (original) The actuator of claim 9 wherein said second head section includes an external electrical connection member.

11. (original) The actuator of claim 10 wherein said external electrical connection member is electrically connected with said motor regardless of the position of said second head section relative to said first head section.

12. (original) The actuator of claim 1 including an override rotation member connected to one of said rotation shaft and said drive shaft for rotation therewith.

13. (original) The actuator of claim 12 wherein said rotation member is an override gear having a plurality of peripheral teeth.

14. (original) The actuator of claim 12 including a selectively operable access opening in alignment with said rotation member to provide manual rotation access to said rotation member.

15. (currently amended) ~~The~~ An electrically powered actuator ~~of claim 1 including~~ comprising:

an elongated housing having a longitudinal axis;

a rotation shaft extending along said longitudinal axis and being rotatably supported within said housing member;

a thrust member concentric with, and axially moveable relative to, said rotation shaft along said longitudinal axis;

a coupling nut connected with said thrust member and moveable therewith, said thrust member and said coupling nut being non-rotatable relative to said housing member; ~~and~~

an electric motor having an output drive shaft, said output drive shaft being in-line and concentric with, and integrally formed with said rotation shaft; and

a first bearing between said coupling nut and a first portion of said housing and a second bearing between said thrust member and a second portion of said housing.

16. (currently amended) The actuator of claim ~~16~~ 15 wherein said thrust member includes a thrust tube with an exterior surface and said housing includes a tube head and wherein said second bearing is positioned between a portion of said tube head and said exterior surface of said thrust tube.

17. (original) The actuator of claim 1 including a bearing block positioned between said housing and said electric motor and a bearing mounted on said output drive shaft and within said bearing block.

18. (original) The actuator of claim 17 wherein said rotation shaft includes a distal free end wherein said bearing includes a distal end and a proximal end and wherein one of said output drive shaft and said rotation shaft includes a bearing stop.

19. (original) The actuator of claim 18 wherein said distal end of said bearing engages said bearing stop and said proximal end of said bearing is retained by a bearing plate connected with said bearing block.

20. (currently amended) ~~The~~ An electrically powered actuator ~~of claim 19~~ comprising:

an elongated housing having a longitudinal axis;

a rotation shaft including a distal free end, extending along said longitudinal axis and being rotatably supported within said housing member;

a thrust member concentric with, and axially moveable relative to, said rotation shaft along said longitudinal axis;

a coupling nut connected with said thrust member and moveable therewith, said thrust member and said coupling nut being non-rotatable relative to said housing member; ~~and~~

an electric motor having an output drive shaft, said output drive shaft being in-line and concentric with, and integrally formed with said rotation shaft; and

a bearing block positioned between said housing and said electric motor and a bearing mounted on said output drive shaft and within said bearing block wherein one of said output drive shaft and said rotation shaft includes a bearing stop and wherein said bearing includes a distal end which engages said bearing stop and a proximal end which is retained by a bearing plate connected with said bearing block, wherein said bearing plate is connected to said bearing block by a plurality of threaded members.

21. (original) The actuator of claim 1 wherein said actuator includes a distal end and a proximal end and further includes an electrical supply head cover connected with said motor, wherein said head cover includes an exterior surface and first and second recessed portions and

further includes first and second electrical connector posts positioned in said first and second recessed portions.

22. (currently amended) An electrically powered actuator comprising:

~~a screw actuator having an inline, direct drive electrical motor with a drive shaft having first and second ends~~ a housing having a proximal end and a distal end;

a rotation shaft within said housing and having a ~~connected with the first end of said~~ drive shaft portion extending toward the proximal end of said housing and a lead screw portion having a free end extending toward the distal end of said housing;

an electrical motor connected to drive said drive shaft;

a rotary encoder connected with ~~the second end of~~ said drive shaft ~~and being axially moveable relative to said rotation shaft~~ near the proximal end of said housing;

an extendable and retractable thrust assembly surrounding said lead screw portion and having a proximal end located within said housing and a distal end extending outwardly from the distal end of said housing ~~first and second ends~~;

~~a housing surrounding said thrust assembly;~~

a manual override rotation member connected with ~~one of said drive shaft and~~ said rotation shaft for rotation therewith, said rotation shaft and said override rotation member being axially fixed relative to said housing; and

an access opening in said housing to provide manual rotation access to said rotation member.

23. (original) The actuator of claim 22 including a selectively openable and closeable cover for said access opening.

24. (original) The actuator of claim 22 wherein said rotation member includes an override gear having a plurality of peripheral teeth.

25. (original) The actuator of claim 24 including a selectively openable and closeable cover for said access opening.

26. (cancelled)

27. (cancelled)

28. (cancelled)

29. (currently amended) ~~The~~ An electrically powered actuator ~~of claim 26 wherein said~~ comprising:

a screw actuator having an inline, direct drive electrical motor with a drive shaft having first and second ends;

a rotation shaft connected with the first end of said drive shaft and being driven by said motor;

a rotary encoder connected with the second set of said drive shaft and being axially moveable relative to said rotation shaft;

an extendable and retractable thrust assembly having first and second ends;

a housing surrounding said thrust assembly; and

an impact relief assembly positoned between said rotation shaft and said thrust assembly and including a bumper of compressible material and bearing means ~~is~~ positioned between said rotation shaft and said thrust assembly.

30. (cancelled)

31. (currently amended) ~~The~~ An electrically powered actuator ~~of claim 30 wherein said impact relief assembly~~ comprising:

a screw actuator having an inline, direct drive electrical motor with a drive shaft having first and second ends;

a rotation shaft connected with the first end of said drive shaft and being driven by said motor;

a rotary encoder connected with the second end of said drive shaft and being axially moveable relative to said rotation shaft;

an extendable and retractable thrust assembly having first and second ends;

a housing surrounding said thrust assembly; and

an impact relief assembly positioned between said rotation shaft and said thrust assembly wherein said rotation shaft includes a distal end, and said thrust assembly includes a thrust tube having a distal end and wherein said impact relief assembly is positioned between said distal end of said rotation shaft and said distal end of said thrust tube and includes a bumper of compressible material and a bearing member positioned between said bumper and said distal end of said rotation shaft.

32. (original) The actuator of claim 1 wherein said bearing comprises at least one low friction disc.

33. (currently amended) A welding apparatus comprising:

an electric actuator having an elongated housing with a longitudinal axis;

a rotation shaft being rotationally supported with the housing;

a thrust member having a proximal end and a distal free end and being axially moveable relative to said rotation shaft along said longitudinal axis, and an electric motor for rotating ~~having an output shaft integrally formed with~~ said rotation shaft;

a welding gun attached to said distal end of said thrust member; ~~and~~

an actuation link between said distal end and said welding gun; and

first and second axially spaced bearing members positioned between portions of said thrust member and corresponding portions of said housing.

34. (original) The welding apparatus of claim 33 wherein said welding gun includes at least one welding tip positioned offset from said longitudinal axis.

35. (cancelled)

36. (new) An electrically powered actuator comprising:

an elongated housing having a longitudinal axis;

a rotation shaft extending along said longitudinal axis and being rotatably supported within said housing member;

a thrust member concentric with, and axially moveable relative to, said rotation shaft along said longitudinal axis;

a coupling nut connected with said thrust member and moveable therewith, said thrust member and said coupling nut being non-rotatable relative to said housing member;

an electric motor for driving said rotation shaft; and

a first bearing between said coupling nut and a first portion of said housing and a second bearing between said thrust member and a second portion of said housing.

37. (new) An electrically powered actuator comprising:

a screw actuator having an electrical motor for driving a drive shaft having first and second ends;

a rotation shaft connected with the first end of said drive shaft;

a rotary encoder connected with the second set of said drive shaft;

an extendable and retractable thrust assembly having first and second ends; and

an impact relief assembly comprising a bumper of compressible material and a bearing means positioned between said rotation shaft and said thrust assembly.